AMENDMENTS TO THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Currently Amended) Optical apparatus for providing light having a selected linear polarization having a polarization ratio, said apparatus comprising a length of optical fiber and comprising a rare earth for providing light having a first wavelength responsive to said optical fiber receiving pump light having a second wavelength that is different than said first wavelength, wherein when ~~if~~ said length of optical fiber ~~were~~ is placed in a first position wherein said length of fiber is substantially linearly oriented said fiber ~~could propagate~~ supports at said first wavelength a fundamental mode and a plurality of higher order modes and said apparatus ~~could~~ provides light having a first polarization ratio for the selected linear polarization and an M^2 parameter, ~~and wherein~~ said optical apparatus being configured such that said length of fiber is positioned in a second position that increases the bend loss of said fiber relative to said first position such that, responsive to said increased bend loss, said apparatus ~~can~~ provides light having a reduced M^2 parameter relative to said M^2 parameter as well as a second polarization ratio for the selected linear polarization that is increased relative to said first polarization ratio such that said second polarization ratio is at least 6 dB greater than said first polarization ratio, and wherein when said length of fiber is in said second position the apparatus ~~can~~ provides a slope efficiency that is at least 50% of the ratio of said second wavelength to said first wavelength.

2. (Previously Presented) The optical apparatus of claim 1 wherein said reduced M^2 parameter is no greater than 4.

3. (Previously Presented) The optical apparatus of claim 2 wherein said reduced M^2 parameter is no greater than 2.5.

4. (Original) The optical apparatus of claim 1 wherein said slope efficiency is at least 70% of the ratio of said second wavelength to said first wavelength.

5. (Previously Presented) The optical apparatus of claim 1 wherein said second polarization ratio is at least 8 dB greater than said first polarization ratio.

6. (Original) The optical apparatus of claim 1 wherein said first polarization ratio is 0.5 dB or less.

7. (Original) The optical apparatus of claim 1 wherein said second polarization ratio is at least 10 dB.

8. (Previously Presented) The optical apparatus of claim 1 wherein said second polarization ratio is at least 18 dB.

9. (Original) The optical apparatus of claim 1 wherein when substantially linearly oriented said fiber has a V-number for light of said first wavelength of no less than 3.5.

10. (Previously Presented) The optical apparatus of claim 9 wherein said V-number is no less than 4.

11. (Previously Presented) The optical apparatus of claim 9 wherein said V-number is no less than 10.

12. (Original) The optical apparatus of claim 1 wherein said core of said fiber of said length of fiber has a numerical aperture of no greater than 0.1 and said core has a diameter of at least 15 microns.

13. (Currently Amended) Optical apparatus for providing light having a selected linear polarization at an output wavelength, said apparatus comprising a polarization maintaining optical fiber having a core and a cladding disposed about said core, said fiber comprising a rare earth capable of providing light having the output wavelength responsive to said optical fiber being pumped by pump light having a wavelength different than the output wavelength, wherein said core of said fiber, when said fiber is substantially linearly oriented, can propagate

orthogonal first and second linear polarizations of a fundamental mode, said core of said fiber further being multimode at the output wavelength when said fiber is substantially linearly orientated such that a plurality of higher order modes can be supported by said core, wherein said fiber is positioned such that, due to bend loss and independent of auxiliary polarization apparatus, said higher order modes and said first polarization of said fundamental mode experience increased attenuation relative to when said fiber is substantially linearly orientated and are substantially attenuated and wherein said second polarization of said fundamental mode is substantially less attenuated than said first polarization of said fundamental mode.

14. (Original) The optical apparatus of claim 13 wherein when said fiber receives pump light said output light has a polarization ratio of said second polarization to said first polarization of at least 10 dB.

15. (Original) The optical apparatus of claim 13 wherein when said fiber receives pump light said output light can have an M^2 parameter of no greater than 2.5

16. (Currently Amended) An optical apparatus comprising an optical fiber comprising a rare earth for providing light having a first wavelength responsive to said optical fiber being pumped by light having a second wavelength that is different than the first wavelength, the optical fiber being configured to propagate ~~capable of propagating~~ at the first wavelength a fundamental mode and at least one higher order mode, where each of the modes have orthogonal first and second linear polarizations, the first polarizations being substantially parallel, and wherein the effective modal index of the first polarization of the higher order mode at the first wavelength is greater than the effective modal index of the second polarization of the fundamental mode at the first wavelength.

17. (Original) The optical apparatus of claim 16 wherein said fiber comprises at least one grating for reflecting light having the first wavelength.

18. (Original) The optical apparatus of claim 16 comprising a laser for providing output light having said first wavelength, said laser comprising said optical fiber.

19. (Currently Amended) A method of providing output light having a selected linear polarization, comprising providing a length of optical fiber comprising a rare earth for providing output light having a first wavelength responsive to the optical fiber receiving pump light having a second wavelength that is different than said first wavelength, where the fiber can support at the first wavelength a fundamental mode having first and second orthogonal linear polarizations and a plurality of higher order modes; bending the fiber so as to increase the bend loss of the higher order modes and the second linear polarization such that the fiber can provide the output light having an improved beam quality in terms of M^2 parameter and an improved polarization ratio for light having the first polarization; and refraining from introducing excessive bend loss for the first polarization such that the fiber can provide the output light including the first wavelength and the improved M^2 parameter and improved polarization ratio at a slope efficiency of greater than 50% of the ratio of the second wavelength to the first wavelength.

20. (Previously Presented) The optical apparatus of claim 1 wherein said optical apparatus can operate as a laser, said optical apparatus comprising at least one reflector.

21. (Previously Presented) The optical apparatus of claim 1 comprising a light source for providing light having the first wavelength for amplification thereof.

22. (Previously Presented) The optical apparatus of claim 1 comprising a light source for providing said pump light.

23. (Previously Presented) The optical apparatus of claim 1 wherein said reduced M^2 parameter is no greater than 1.2.

24. (Previously Presented) The optical apparatus of claim 1 wherein said optical fiber comprises at least one stress inducing region for providing birefringence.

25. (Previously Presented) The optical apparatus of claim 1 wherein if said length of optical fiber is positioned in said first position wherein said length of fiber is substantially

linearly oriented said optical fiber would have a beat length of no greater than 5 mm at a wavelength of 633 nm.

26. (Previously Presented) The optical apparatus of claim 1 wherein if said length of optical fiber is positioned in said first position wherein said length of fiber is substantially linearly oriented said optical fiber has a fast axis and a slow axis for polarized light, said total attenuation in dB per unit length for light polarized along the fast axis being within 10% of the total attenuation in dB per unit length for light polarized along the slow axis.

27. (Previously Presented) The optical apparatus of claim 13 wherein said optical apparatus can operate as a laser, said optical apparatus comprising at least one reflector.

28. (Previously Presented) The optical apparatus of claim 13 comprising a light source for providing light having the first wavelength for amplification thereof.

29. (Previously Presented) The optical apparatus of claim 13 comprising a light source for providing said pump light.

30. (Previously Presented) The optical apparatus of claim 15 wherein said M^2 parameter is no greater than 1.2.